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ABSTRACT

In Fall 1994, the Virginia Community College System conducted two analyses of space utilization to compare actual facilities utilization in system colleges with state standards for space planning. The first study focused on the utilization of classrooms and class laboratories over the past 4 years, determining the percentages of the standard-use levels that spaces were actually in use. Results from this study included the following: (1) for classrooms, 4 of the system's 23 colleges exceeded the state standard for space utilization in 1994, with Mountain Empire College showing a rate of 117.4% of the standard; (2) for regular labs, 13 colleges exceeded the standard, while for heavy labs 5 colleges did so; (3) from 1992 to 1994, classroom utilization decreased for 11 colleges and increased for 6; (4) from 1992 to 1994, rates for heavy labs declined for 15 colleges and increased for 6; and (5) overall, station use remained steady or decreased slightly compared to 1992. The second study performed a similar analysis of use levels, but included classroom use for non-credit, continuing education courses to determine differences in utilization rates for the colleges. This study revealed that, in general, classroom-use rates improved for about two-thirds of the colleges, with six of these moving above the standard when the additional use was counted. As expected, however, neither heavy nor regular laboratory-use rates increased significantly. (Data tables are included.) (BCY)

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VIRGINIA COMMUNITY COLLEGE SYSTEM

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ED 387 183

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**VCCS Utilization of
Classrooms and
Class Laboratories
Fall 1994**

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Utilization of VCCS Classrooms:
Measures that Include Non-Credit
(CEU) Instruction.



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VCCS Utilization of
Classrooms
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March 1995

Utilization of Classrooms and Class Laboratories

One component of SCHEV's space planning system provides comparisons of colleges' actual facilities utilization with standards adopted for space planning purposes. There are separate standards for:

- The amount of space used per student desk or station.
- The number of hours that a room is used per week.
- The percentage of stations occupied when a room is used.

The first section of this report (Tables I-III) presents combined measures of actual room use and station occupancy from each of the last three utilization studies and, for the 1994 study, the measure is expressed as a percentage of the combined SCHEV standards. This latter measure reflects, on average, how the number of hours that students use desks or stations compares to SCHEV assumptions about how many hours per week they should be used. Off-site facilities have been excluded from all utilization measures.

College utilization measures from the Fall 1994 study permitting separate comparisons to each of the three standards are presented in Table IV. Data in this table generally agree with SCHEV's review, not yet released, of Fall 1994 data. The standards for each college are listed in Table V.

Generally, the data show:

- If a 5-point change in the percent-of-standard index (Tables I-III) is used as a yardstick, more colleges experienced a drop than a gain from 1992 to 1994. Note that student contact hours(station use) and student credit hours are closely related, and the latter was lower by two percent in Fall 1994 for the system as a whole.
- Looking at utilization by type of space and using the five percent criterion, classroom utilization decreased for eleven colleges and increased for six. There was little change in the number of colleges operating at or above the SCHEV standard. Roughly one in four colleges achieved the combined standard. Rates for heavy labs declined for 15 colleges and increased for six. The number of colleges at or near the SCHEV standard remained the same, with about one in three meeting the standard in both the 1992 and 1994 studies. For regular labs, two of three colleges exceeded SCHEV standards, and of these half exceeded the standard by a large margin. Nearly equal numbers of colleges showed increases and decreases compared to 1992 rates. As was the case for the system in the 1992 study, labs are used many hours per week and are filled close to capacity when used.
- Overall, station use remained steady or decreased slightly compared to 1992, depending on the type of room. Only a few colleges had major gains. Regular and heavy labs continue to be better utilized than classrooms.

Weekly Use of Rooms and Student Stations, 1990-1994

A primary data outcome of the SCHEV utilization study is the total weekly station use hours (WSUH) for classrooms and labs. This number reflects how many hours per week that students are in the rooms and roughly translates to student contact hours. Dividing this number by the total number of stations or seats available in inventory produces an average weekly station use. This measure reflects both frequency of room use and occupancy when in use. The corresponding SCHEV standard or expected level for station use is based on the product of the room use and occupancy rate standards. For example, standards of 40 hours per week for room use and 62.5 percent for occupancy yield an expected weekly station use rate of 25 hours.

Tables I -III present actual station use for the last three utilization studies and, for 1994, actual use as a percentage of SCHEV standards. Information on classrooms, regular labs, and heavy labs are tabled separately. All utilization data and standards are for the extended day which includes evening hours.

TABLE I
WEEKLY STATION USE HOURS
ALL R AND Z FACILITIES EXCLUDED
CLASSROOMS

College	1990	1992	1994	Standard	1994 As A Percent of Standard
Blue Ridge	19.3	19.4	19.8	26.65	74.3
Central Virginia	22.3	21.3	22.6	26.65	84.8
Dabney S. Lancaster	20.5	18.3	13.2	25.00	52.8
Danville	23.9	23.7	22.1	26.65	82.9
Eastern Shore	7.8	14.3	18.4	25.00	73.6
Germanna	23.2	24.9	25.8	25.00	103.2
J. Sargeant Reynolds	24.3	24.1	21.6	27.30	79.1
John Tyler	21.5	19.9	21.3	26.65	79.9
Lord Fairfax	19.4	25.6	25.2	26.65	94.6
Mountain Empire	22.8	23.4	31.3	26.65	117.4
New River	22.1	24.5	20.6	26.65	77.3
Northern Virginia	29.7	28.3	27.1	27.30	99.3
Patrick Henry	15.3	18.0	23.5	26.65	88.2
Paul D. Camp	19.1	19.6	16.7	25.00	66.8
Piedmont Virginia	25.9	24.8	26.0	26.65	97.6
Rappahannock	8.7	12.4	10.1	25.00	40.0
Southside Virginia	14.2	17.9	18.9	26.65	70.9
Southwest Virginia	23.7	20.1	25.2	26.65	94.6
Thomas Nelson	23.5	33.6	31.2	27.30	114.3
Tidewater	23.0	23.5	22.0	27.30	80.6
Virginia Highlands	23.2	23.4	19.0	26.65	71.3
Virginia Western	28.6	32.1	29.6	27.30	108.4
Wytheville	13.9	13.9	11.6	26.65	43.5

TABLE II
WEEKLY STATION USE HOURS
ALL R AND Z FACILITIES EXCLUDED
REGULAR LABS

College	1990	1992	1994	Standard	1994 As Percent of Standard
Blue Ridge	17.1	23.6	23.6	20.25	116.5
Central Virginia	25.8	25.8	19.6	20.25	96.8
Dabney S. Lancaster	14.2	12.2	14.0	18.13	77.4
Danville	17.4	17.7	16.1	20.25	79.5
Eastern Shore	10.7	9.2	11.4	18.13	62.9
Germanna	25.5	26.5	28.5	18.13	156.9
J. Sargeant Reynolds	20.6	26.6	20.3	23.20	87.5
John Tyler	34.7	34.2	30.7	20.25	151.6
Lord Fairfax	13.6	24.5	17.3	20.25	85.6
Mountain Empire	30.1	16.1	28.9	20.25	142.8
New River	20.3	21.9	22.6	20.25	111.6
Northern Virginia	20.1	16.7	25.2	23.20	108.5
Patrick Henry	11.1	11.5	22.6	20.25	111.7
Paul D. Camp	13.8	15.6	14.7	18.13	81.1
Piedmont Virginia	22.4	26.6	22.4	20.25	110.6
Rappahannock	9.3	12.0	9.7	18.13	53.5
Southside Virginia	13.7	15.5	25.4	20.25	125.6
Southwest Virginia	32.1	30.9	25.7	20.25	127.0
Thomas Nelson	21.1	33.5	29.8	23.20	128.6
Tidewater	18.7	19.2	17.4	23.20	75.1
Virginia Highlands	20.6	23.9	17.3	20.25	85.5
Virginia Western	25.3	29.9	33.6	23.20	144.8
Wytheville	17.5	26.3	25.3	20.25	125.2

TABLE III
WEEKLY STATION USE HOURS
ALL R AND Z FACILITIES EXCLUDED
HEAVY LABS

College	1990	1992	1994	Standard	1994 As Percent of Standard
Blue Ridge	12.9	12.0	10.6	20.25	52.5
Central Virginia	16.2	16.9	15.1	20.25	74.5
Dabney S. Lancaster	13.3	29.6	10.2	18.13	56.4
Danville	23.3	18.0	16.5	20.25	81.7
Eastern Shore	27.8	15.1	11.0	18.13	60.6
Germanna	13.3	27.4	23.0	18.13	126.8
J. Sargeant Reynolds	29.8	30.1	16.5	23.20	71.1
John Tyler	22.8	21.7	17.7	20.25	87.3
Lord Fairfax	9.3	8.4	8.9	20.25	43.8
Mountain Empire	28.8	7.0	26.0	20.25	128.4
New River	23.4	17.7	16.4	20.25	80.8
Northern Virginia	21.7	16.8	15.7	23.20	67.5
Patrick Henry	12.9	18.7	24.4	20.25	120.5
Paul D. Camp	13.7	12.7	14.7	18.13	81.2
Piedmont Virginia	15.1	14.6	14.7	20.25	72.6
Rappahannock	3.2	4.1	5.2	18.13	28.7
Southside Virginia	11.8	13.8	19.2	20.25	95.0
Southwest Virginia	36.7	22.3	21.1	20.25	104.3
Thomas Nelson	27.0	30.6	20.1	23.20	86.6
Tidewater	17.5	18.2	14.8	23.20	63.6
Virginia Highlands	21.3	14.4	9.6	20.25	47.2
Virginia Western	19.5	26.5	25.0	23.20	107.8
Wytheville	18.8	24.0	19.5	20.25	96.1

Facilities Utilization Measures and Standards

Separate measures for room use, occupancy rates, and amount of space per desk or station are presented in Table IV. Room use is measured in hours per week. Occupancy is the percentage of stations occupied when the room is used. ASF/Station refers to the square footage allocated for each station. These measures are provided for each type of classroom space. SCHEV standards for each measure and type of space are listed, by college, in Table V. Again, off-site facilities were not included in these reports, and all measures and standards are for the extended day.

The next SCHEV Facilities Utilization Study is scheduled for Fall 1996.

TABLE IV
UTILIZATION OF ON-SITE SPACE
FALL 1994 DATA, EXTENDED DAY

COLLEGE	CLASSROOM			REGULAR LAB			HEAVY LAB		
	ASF/Station	Room Use	Occupancy	ASF/Station	Room Use	Occupancy	ASF/Station	Room Use	Occupancy
Blue Ridge	13.4	39.5	50.0	28.2	34.6	68.3	71.4	19.7	54.0
Central Virginia	17.4	35.8	63.0	39.1	22.9	85.6	60.9	18.1	83.3
Dabney S. Lancaster	14.2	34.1	38.7	35.1	25.1	55.9	80.7	27.0	37.9
Danville	19.5	34.8	63.6	54.5	21.6	74.5	126.6	21.7	76.2
Eastern Shore	21.3	27.2	67.7	41.9	16.3	70.1	95.3	17.0	64.6
Germanna	21.3	37.8	68.2	56.0	35.0	81.3	76.1	26.4	87.1
J. Sargeant Reynolds	17.4	33.0	65.5	42.6	26.8	75.7	84.7	26.2	63.0
John Tyler	22.2	27.0	78.8	45.7	29.8	102.7	87.5	17.5	101.0
Lord Fairfax	18.3	35.0	72.0	43.4	19.6	88.4	58.3	13.0	68.3
Mountain Empire	18	39.4	79.4	35.8	36.7	78.8	65.1	25.9	100.4
New River	18.2	31.8	64.8	46.0	30.5	74.1	98.3	27.7	59.1
Northern Virginia	18.1	37.3	72.6	46.3	26.2	96.1	72.0	18.0	87.0
Patrick Henry	16.2	40.2	58.4	72.8	25.0	90.5	122.7	21.5	113.5
Paul D. Camp	18.0	28.0	59.5	71.4	17.2	85.5	75.8	25.0	58.9
Piedmont Virginia	21.6	36.0	72.1	42.9	30.4	73.7	63.9	21.1	69.5
Rappahannock	18.9	17.7	56.8	48.7	11.5	84.3	96.2	6.6	78.3
Southside Virginia	20.2	29.3	64.5	56.4	25.1	101.3	63.2	28.3	68.0
Southwest Virginia	15.7	39.1	64.5	44.2	24.6	104.5	64.4	31.2	67.7
Thomas Nelson	16.1	37.1	84.1	43.7	37.3	80.0	93.1	29.9	67.2
Tidewater	15.7	36.8	59.9	32.7	27.1	64.3	62.6	20.9	70.6
Virginia Highlands	16.2	32.3	58.7	30.5	27.7	62.5	72.8	17.3	55.3
Virginia Western	22.1	33.7	87.7	57.5	34.8	96.5	46.3	25.0	100.0
Wytheville	18.9	19.8	58.4	46.2	27.7	91.5	67.2	23.4	83.2

TABLE V
SCHEV UTILIZATION STANDARDS, EXTENDED DAY

COLLEGE	CLASSROOM			REGULAR LAB			HEAVY LAB		
	ASF/Station	Room Use	Occupancy	ASF/Station	Room Use	Occupancy	ASF/Station	Room Use	Occupancy
Blue Ridge	16	41	65.0	45	27	75.0	100	27	75.0
Central Virginia	16	41	65.0	45	27	75.0	100	27	75.0
Dabney S. Lancaster	16	40	62.5	45	25	72.5	100	25	72.5
Danville	16	41	65.0	45	27	75.0	100	27	75.0
Eastern Shore	16	40	62.5	45	25	72.5	100	25	72.5
Germanna	16	40	62.5	45	25	72.5	100	25	72.5
J. Sargeant Reynolds	15	42	65.0	45	29	80.0	100	29	80.0
John Tyler	16	41	65.0	45	27	75.0	100	27	75.0
Lord Fairfax	16	41	65.0	45	27	75.0	100	27	75.0
Mountain Empire	16	41	65.0	45	27	75.0	100	27	75.0
New River	16	41	65.0	45	27	75.0	100	27	75.0
Northern Virginia	15	42	65.0	45	29	80.0	100	29	80.0
Patrick Henry	16	41	65.0	45	27	75.0	100	27	75.0
Paul D. Camp	16	40	62.5	45	25	72.5	100	25	72.5
Piedmont Virginia	16	41	65.0	45	27	75.0	100	27	75.0
Rappahannock	16	40	62.5	45	25	72.5	100	25	72.5
Southside Virginia	16	41	65.0	45	27	75.0	100	27	75.0
Southwest Virginia	16	41	65.0	45	27	75.0	100	27	75.0
Thomas Nelson	15	42	65.0	45	29	80.0	100	29	80.0
Tidewater	15	42	65.0	45	29	80.0	100	29	80.0
Virginia Highlands	16	41	65.0	45	27	75.0	100	27	75.0
Virginia Western	15	42	65.0	45	29	80.0	100	29	80.0
Wytheville	16	41	65.0	45	27	75.0	100	27	75.0

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Utilization of VCCS Classrooms:
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The Use Of Classrooms for Non-Credit Instruction

Recently, several State Council reports have re-emphasized the importance of maintaining high levels of physical(space) productivity(cf. "Guidelines for Higher Education Fixed Assets for Educational and General Programs" , Feb.1995 and "Restructuring Plans: Discussion", April 1994). Although the specific guideline varies by size and type of institution, the standard for the utilization of existing classroom space is often expressed in these reports as "40 hours per week."

Because this standard is difficult to achieve, several community colleges inquired about including classroom use for non-credit instruction in productivity measures. SCHEV staff agreed that the use of classrooms for non-credit, continuing education courses could be included with information on credit courses that is currently used to gauge classroom use.

The tables below describe this combined use for each type of classroom space. Generally, classroom use rates improved for about two-thirds of the colleges. Of these, six moved above the standard when this additional use was counted. Several others surpassed the less formal "40 hours per week" criterion. As would be expected, laboratories are utilized less often for these activities. A few colleges did, however, surpass the regular and heavy lab standards when this additional use was counted.

Procedural steps and edits used to develop the non-credit utilization data are summarized below. These steps are similar to those now applied to credit courses and should generally agree with those developed by SCHEV staff for reviewing this type of room use.

Data Steps and Procedures

Non-credit course records were produced by colleges from the CEU subsystem of SIS(procedure CEU520) following the fall mid-term census date.

Centrally, several edits similar to those used for credit courses were applied. Courses not starting before the fall census date were dropped as were all non-scheduled or TBA classes. The rooms designated in CEU course records had to be included in the F1A room inventory with the same building and room codes and must have been assigned room use codes of "110" or "210". No type of contact-to-credit (CEU) edit was applied. Only on-site courses/rooms were included.

For courses not rejected, weekly room use hours totals were produced for classrooms, regular labs, and heavy labs and then combined with those produced by FUSE software based on the Fall 94 utilization study for credit offerings.

**UTILIZATION OF ON-SITE SPACE
CREDIT AND NON-CREDIT INSTRUCTION
FALL 1994, EXTENDED DAY
CLASSROOMS**

WEEKLY ROOM USE HOURS

College	SCHEV Standard	Credit Instruction	Credit and Non-Credit Instruction
Blue Ridge	41	39.5	41.6
Central Virginia	41	35.8	41.0
Dabney S. Lancaster	40	34.1	34.7
Danville	41	34.8	34.8
Eastern Shore	40	27.2	27.2
Germanna	40	37.8	39.4
J. Sargeant Reynolds	42	33.0	34.0
John Tyler	41	27.0	27.7
Lord Fairfax	41	35.0	35.0
Mountain Empire	41	39.4	41.2
New River	41	31.8	33.7
Northern Virginia	42	37.3	40.4
Patrick Henry	41	40.2	40.2
Paul D. Camp	40	28.0	33.9
Piedmont Virginia	41	36.0	36.0
Rappahannock	40	17.7	23.7
Southside Virginia	41	29.3	29.3
Southwest Virginia	41	39.1	39.3
Thomas Nelson	42	37.1	42.0
Tidewater	42	36.8	42.5
Virginia Highlands	41	32.3	32.4
Virginia Western	42	33.7	34.1
Wytheville	41	19.8	19.8

**UTILIZATION OF ON-SITE SPACE
CREDIT AND NON-CREDIT INSTRUCTION
FALL 1994, EXTENDED DAY
REGULAR LAB**

WEEKLY ROOM USE HOURS

College	SCHEV Standard	Credit Instruction	Credit and Non-Credit Instruction
Blue Ridge	27	34.6	34.9
Central Virginia	27	22.9	22.9
Dabney S. Lancaster	25	25.1	25.5
Danville	27	21.6	21.6
Eastern Shore	25	16.3	16.3
Germanna	25	35.0	37.8
J. Sargeant Reynolds	29	26.8	26.9
John Tyler	27	29.8	54.5
Lord Fairfax	27	19.6	34.4
Mountain Empire	27	36.7	36.7
New River	27	30.5	30.5
Northern Virginia	29	26.2	26.8
Patrick Henry	27	25.0	25.0
Paul D. Camp	25	17.2	19.2
Piedmont Virginia	27	30.4	30.4
Rappahannock	25	11.5	11.5
Southside Virginia	27	25.1	25.1
Southwest Virginia	27	24.6	25.2
Thomas Nelson	29	37.3	37.3
Tidewater	29	27.1	28.3
Virginia Highlands	27	27.7	28.1
Virginia Western	29	34.8	36.1
Wytheville	27	27.7	27.7